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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------|------------------|
| 10/826,614 | 04/16/2004 | Valerie Guralnik | H0005848 US CIP 1 (256.21) | 1321 |
| 21186 | 7590 | 07/22/2005 | EXAMINER | |
| SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402-0938 | | | BUI, BRYAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2863 | |
| DATE MAILED: 07/22/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/826,614 | Applicant(s) GURALNIK ET AL. | |
| | Examiner Bryan Bui | Art Unit 2863 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29 is/are allowed.
- 6) ☒ Claim(s) 1,6-8,16 and 21 is/are rejected.
- 7) ☒ Claim(s) 2-5,9-15,17-20 and 22-28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

Claim 18 is objected to because of the following informalities: the term (for new bad actors) in line 1 should be removed.. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 6-8, 16 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsiung et al (US 6,853,920).

With respect to claims 1 and 16, Hsiung et al teaches a method and a system of identifying events in a process comprising: running a principal component analysis model on sensor data from the process (column 63, lines 53+, column 63, table 10, PCA performance); calculating statistics related to the model (column 63, lines 57-59, column 63, table 10, column 70, lines 3-10); determining if an event is occurring (column 63, lines 59-62); and finding a nearest cluster of bad actors related to the event to identify the event (column 19, line 66 to column 20, line 25 and column 62, table 10). It is noted that the term "bad actors" is not defined in the specification of the application. Examiner reminds applicant that

during patent examination, the pending claims must be given the broadest reasonable interpretation.

With respect to claims 6-7, Hsiung et al teach wherein a cluster is limited to a predetermined number of bad actors (tables 5 and 10) and wherein the known events have definitions which are generalized (tables 5 and 10).

With respect to claims 8 and 21, Hsiung et al teach wherein the statistics comprise Q and T2 (table 5).

Allowable Subject Matter

3. Claims 2-5, 9-15, 17-20, 22-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In combination with other limitations of the claim. The prior art fails to teach wherein finding a nearest cluster of bad actors comprises comparing new bad actor vectors to known clusters in a library of clusters for bad actors; and identifying a sequence of cluster matches; and correlating the sequence of cluster matches to known events; using a feature scoring scheme to identify top contributors of bad actors.

Claim 29 are indicated allowable over the prior art of record because the prior art fails to teach the claimed combination as recited, particularly in combination of: a training module that is run on historical data to create a pool of vectors with values for the variables, wherein the training module further creates clusters of bad actors from the values based on statistics and associates the clusters with known events; and a run time module that receives incoming data from the

sensors, calculates statistics, determines if events are occurring, and identifies clusters to identify events.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Bui whose telephone number is 571-272-2271. The examiner can normally be reached on M-Th from 7am-4pm, and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BB

7/12/2005

BRYAN BUI
PRIMARY EXAMINER

